JENNIFER M. GRANHOLM
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF AGRICULTURE
LANSING

DAN WYANT
DIRECTOR

Dear

Enclosed is Michigan's 2004 Water Use Conservation Plan form for agricultural operations, along with important instructions that will ensure you are in compliance with Michigan's Water Use Reporting Law. Your name and address were taken from the registration form you submitted to the Michigan Department of Agriculture (MDA). There is no fee for reporting this information to the MDA. To assist you, we have enclosed a list of frequently asked questions and a postage-paid return envelope. The completed form is due no later than *February 15, 2005,* so your prompt attention is appreciated.

This is the first year that agricultural operations with the capacity to withdraw over 100,000 gallons per day (70 gallons per minute) are required to submit information to the MDA regarding water withdrawals and water conservation practices used on their farms. This was mandated by Public Act 148 of 2003, now Part 327 of P.A. 451 of 1994, the Natural Resources and Environmental Protection Act. The MDA is required to combine all reported agricultural water withdrawal information at the township level and report the township totals to the Michigan Department of Environmental Quality (MDEQ). The additional information on the form is required by law to be submitted, and it will be retained by the MDA but not reported to the MDEQ.

If the water you withdraw is used by other than a farm operation for agricultural production, you must report your water use to the MDEQ. For the purposes of water use reporting to the MDA, farm operations are for the commercial production, harvest, and storage of farm products, such as grain and feed crops, forage and sod crops, dairy and livestock, poultry, fruit and vegetables, fish, and nursery stock. This does not include facilities that process agricultural products, or landscaping businesses if you do not raise your own horticultural stock.

The purpose of this program is to create an inventory of Michigan water uses to strengthen the legal framework for opposing unwarranted water diversions from the Great Lakes Basin to other regions. Other water users have been required to report their water withdrawals for a number of years, while agricultural water use was estimated. Actual numbers for agricultural operations are now required to improve the accuracy of Michigan's water use totals. This will provide essential data to help Michigan and the other states in the Great Lakes Region address future water resources issues.

If you have any questions, or need assistance, please call Robert Pigg at *517-373-6893*, or visit the MDA water-use Web page at http://www.michigan.gov/mdamichiganwateruse. Thank you for your cooperation.

Sincerely,

Vicki J Pontz

Vicki Pontz, Director
Environmental Stewardship Division

2004 AGRICULTURAL WATER CONSERVATION PLAN INSTRUCTIONS

1. **Farm information –** please include the farm name, manager/owner, telephone number, street address, city, state and zip code.

2. **Pump information –** please complete a section for each pump you own or operate. When reporting, do not report pumps that are connected to municipal/public water supplies. If you have more than one pump, please provide the data for the next pump in the space provided. If you have more than 5 pumps, please complete additional forms (by making copies of the second page of the form) until you have reported all pumps.

   A. **Pump identification and location -** provide the name or number you use to identify the pump (i.e., north field, No. 13, etc.), and the county and township that pump is in.

   B. **Water source –** for the pump identified in "A", indicate whether the pump is pumping groundwater (i.e., a well), surface water (i.e., natural pond, river, lake, etc.), or pond water that is supplied by a well. *Static water level* is the level of water in a well when no water is being pumped. It is measured as the distance from the ground surface (or measuring point near the ground surface) to the water level after the well has been shut down for several hours. It is usually read in feet and inches. Refer to the *Water Use Reporting Frequently Asked Questions* that were mailed with the form and instructions for more information on how best to measure static water level.

   C. **Water uses –** indicate how the water identified in "B" is being used.

      If it is being used for irrigation, in C-1, write in the crop name and the acres of that crop being irrigated by the pump identified in "A".

      If more than one crop is under irrigation and being supplied by the pump identified in "A", then use the additional boxes (C-2, C-3). Examples include: seed corn, dry beans, wheat, oats, hay, alfalfa, sugar beets, tree fruit, berries, sod, mint, mustard, etc.

      If the water is being used for other purposes, then write that purpose in the "other use" line. Other uses include, but are not limited to:

Beef cattle and calves	Aquaculture
Dairy cattle and calves	Equipment washing
Chickens	Building sanitation
Turkeys	Fire suppression
Hogs and pigs	Crop washing
Sheep and lambs	Greenhouse crops
Fruit crop cooling	Field nursery crops
Water table maintenance	Container nursery crop

   D. **Water use by month -** complete this section by indicating how much water was pumped by month in 2004. The amount pumped must be provided in total gallons (i.e., 130,000, 15,000,000, etc.). In the last box, please add the monthly information together to provide an annual total of water pumped by the pumping plant indicated in “A”.

Conservation practices implemented – please check all boxes on the back of this page that represent water conservation practices used within your operation. The completed checklist will represent your water use conservation plan, and must be submitted with your water use reporting form.

3. **Deadline -** please complete and return this form for all your pumps by ***February 15, 2005***. A completed 2004 water use conservation plan will include:

   A. Front page with **farm information.**

   B. Complete **pump information** for every pump or well you own or operate that supplies water for agricultural operations. Include data from each month for the 2004 calendar year. Make additional copies of the form if you have more than 5 pumps.

   C. The check sheet for **water conservation practices implemented** within your operation.

For more information on water use reporting requirements,
call Robert Pigg, Michigan Department of Agriculture, at 517-373-6893

2004 WATER USES AND CONSERVATION PRACTICES
(Submitted in accordance with P. A. 451 of 1994, MCL 324.32708)

Conservation Practices Implemented

The Water Use Reporting Law requires farms reporting their water use to the MDA to include applicable water conservation practices, and an implementation plan for those practices. Please check all boxes that represent conservation practices used on your farm. The practices listed are found in the *Generally Accepted Agricultural Management Practices* (GAAMPS) *for Irrigation Water Use.* For more information, please visit http://michigan.gov/mda. Click on *Farming*, then, under *Environment*, click on *GAAMPs*.

System Management

- ☐ Measure the amount of water applied accurately
- ☐ Monitor pumping plant efficiency
- ☐ Maintain the irrigation system regularly to be sure it is in good working condition
- ☐ Operate sprinkler systems to minimize drift and off-target application
- ☐ Ensure sprinkler nozzle/drip applicator flow rate is matched to the infiltration rate of the soil or medium
- ☐ Provide noise control where needed

Record Keeping

- ☐ For each crop irrigated, keep records on the crop type and location
- ☐ Keep records on the source of the water used
- ☐ Record date and amount of each irrigation application or the total amount of water applied to an area
- ☐ Keep records on all system inspections and repairs that influence uniformity and leaks
- ☐ Regularly calibrate fertigation and chemigation equipment, if used, and maintain records
- ☐ Keep records of the results each time the sprinkler system uniformity is evaluated

Irrigation Scheduling

- ☐ Know the available soil water for each unit scheduled
- ☐ Know the depth of rooting for each crop irrigated
- ☐ Use container capacity in scheduling irrigation for container grown nursery or greenhouse crops
- ☐ Know the allowable moisture depletion at each stage of crop growth
- ☐ Measure, estimate, or use published evaportranspiration data to determine crop water use
- ☐ Measure rainfall in each field irrigated and adjust irrigation schedule/amount accordingly

Application Practices

- ☐ Choose irrigation application amounts that will avoid surface runoff under sprinkler irrigation
- ☐ In the case of container irrigation, runoff is managed through recycling or proper disposal systems
- ☐ Assure that sprinkler application rates are below the soil infiltration rate
- ☐ When irrigation is used, split nitrogen fertilizer applications
- ☐ Incorporate appropriate backflow-prevention safety devices if a chemigation/fertigation system is used
- ☐ Avoid applying more water than needed to replace the soil/media moisture deficit

MICHIGAN DEPARTMENT OF AGRICULTURE WATER USE REPORTING FREQUENTLY ASKED QUESTIONS

1. What happens to the information I report to the Michigan Department of Agriculture?
Water use information reported to the MDA is combined with other water use information from the same township. The total water withdrawn, on a township level, is then reported by the MDA to the Michigan Department of Environmental Quality (MDEQ). The remaining information is not released to the MDEQ, but it will be retained by the MDA. It may be combined with other data for reports about agricultural water withdrawals and use.

2. Is my water use report information subject to the Freedom of Information Act?
The MDA cannot prevent the release of water use information requested under the Freedom of Information Act.

3. If I'm pumping out of a pond that is fed by a spring, do I need to report?
If the combined capacity of all pumps equals 100,000 gallons per day or more for 30 days, regardless of water sources, you are required to report your water use either to the MDA or the MDEQ.

4. I pump water from a well with less than 100,000 gallons per day (gpd) capacity into a pond. Then I irrigate from the pond with a pump that has a capacity greater than 100,000 gpd. Do I have to report?
If the combined capacity of all pumps equals 100,000 gallons per day or more for 30 days, regardless of water sources, you are required to report your water use either to the MDA or the MDEQ.

5. If my irrigation/barn well supplies my residence, do I need to report my household use?
No.

6. I own several farms in different townships/counties. Should I combine them or report them separately?
The reporting form is largely concerned with the location of the pumps and wells used for water withdrawals. Operations with separate corporate identities, or under separate management, or that are otherwise distinct farm operations, should report separately. A single farm operation, under one management, with fields in several townships, or even several counties in some cases, could combine the reports. However, each pump will still have to be identified and reported.

7. Are livestock operations required to report?
If the combined capacity of all pumps equals 100,000 gallons per day or more for 30 days, you must report any agricultural water withdrawal either to the MDA or the MDEQ.

8. Do other water users have to report?
Yes. After the passage of legislation in 1990, water use reporting was phased in over several years for public water supply systems, industrial self-supply systems (ex: GM's water system), golf courses, power plants, and other water users. They are required to report their water use to the MDEQ if they have the total capacity to withdraw 100,000 gallons per day for 30 days.

9. Who should report water use on rented farm land?
Water use reporting is ultimately the responsibility of the landowner. The MDA suggests that the person who is renting the land, and withdrawing ground water or surface water, report the water use.

They should gather the data, provide the information to the land owner, report it, and keep a copy for their records.

10. I pump water from a well to fill a pond, and then pump from the pond to irrigate. How do I report my water use?

The water use reporting legislation defines a withdrawal as the removal of water from its source. For this reason, people that pump from a well to a pond or other storage system and then withdraw the water for an agricultural use should report the amount of water that is pumped from the pond. (Observations of these systems suggest that the majority of the water being used is ground water from the well; however, the water withdrawn from the pond is a combination of ground water and surface water.)

11. How do I determine the static water level of my wells?

The static water level is the depth at which water is first present in a well when the well is not being pumped. For the purposes of this legislation, the static water level of a flowing well will be zero–since the water level is at the surface.

Several ways to determine the static water level are shown below.

- **Well log information:** Since 1968, well drillers have been required by law to supply the state with a copy of the well log when they drill a well. Well logs should show the static water level at the time the well was drilled. You can use the static water level and the well log date to meet the reporting requirement. You may be able to get a copy of your well log from the well driller, or at http://www.deq.state.mi.us/well-logs/.

- **Measure with a drop line:** In some situations the top of the well casing, or a plug of some type, can be removed to allow access to the inside of the well casing. You can then lower a weighted chalk line down the well until you reach the water level. The chalk line is then removed, and the distance from the top of the chalk line to the bottom of the unwashed (dry) part of the line is measured. Electrical measuring tapes are also available, which will give an indication such as a beep, a flashing light, or through a meter, when the line reaches the water level. The depth can then be read directly from the tape. *This method risks contaminating the well. Tapes and lines can also get stuck, and may damage the pump or other well equipment if they become stuck and later interfere with the pump or wiring. Therefore, it is advisable to use a well driller or consultant to make a direct measurement.*

- **Air line data:** Some wells have an air line. An air line allows water level measurements to be taken before and during pumping, which gives information on the aquifer and well performance. If you are having work done on your well, you may want to consider having an air line installed at the same time.

- **Information from nearby wells**: If static water level information is available from wells that are within a hundred yards of the well you are reporting on, and located in the same aquifer (e.g., they have a similar depth), you can use that information. This can include the use of an appropriate monitoring well. It's important to note on the form that the SWL data is not from the actual well.

2004 WATER USE CONSERVATION PLAN

(Submitted in accordance with Part 327 of P.A. 451 of 1994, MCL 324.32708)

Mail to:
Michigan Department of Agriculture
ESD- Water Use Reporting
P.O. Box 30017
Lansing, MI 48909

Instructions and additional information requested is located at the end of this document.

1. FARM INFORMATION:

Farm Name: _____ Manager/Owner: _____ Phone: _____

_____

Street Address City State Zip Code

2. PUMP INFORMATION: COMPLETE THE FOLLOWING FOR EACH PUMP YOU OWN AND/OR OPERATE. DO NOT REPORT WATER FROM MUNICIPAL/PUBLIC WATER SUPPLIES. COMPLETE ADDITIONAL SHEETS AS NECESSARY.

A. PUMP ID AND LOCATION	**B. WATER SOURCE** ☐ Groundwater – Static Water Level: _____ ft. _____ in. Date Taken: _____ ☐ Surface Water ☐ Pond Supplied by Well		
Pump ID: _____	**C-1. WATER USES**	**C-2. WATER USES**	**C-3. WATER USES**
County: _____	Crop _____ Acres _____	Crop _____ Acres _____	Crop _____ Acres _____
Twp.: _____	*Or*	*Or*	*Or*
	Other Use _____	Other Use _____	Other Use _____

D. WATER USE BY MONTH

Jan	Feb	Mar	Apr	May	June	**ANNUAL TOTAL:**
July	Aug	Sept	Oct	Nov	Dec	_____

A. PUMP ID AND LOCATION	**B. WATER SOURCE** ☐ Groundwater – Static Water Level: _____ ft. _____ in. Date Taken: _____ ☐ Surface Water ☐ Pond Supplied by Well		
Pump ID: _____	**C-1. WATER USES**	**C-2. WATER USES**	**C-3. WATER USES**
County: _____	Crop _____ Acres _____	Crop _____ Acres _____	Crop _____ Acres _____
Twp.: _____	*Or*	*Or*	*Or*
	Other Use _____	Other Use _____	Other Use _____

D. WATER USE BY MONTH

Jan	Feb	Mar	Apr	May	June	**ANNUAL TOTAL:**
July	Aug	Sept	Oct	Nov	Dec	_____

I hereby certify under penalty of law (MCL 324.32713) that the information I have reported is accurate and complete.

Signature _____ **Date:** _____ **Page** ☐ **of** ☐

A. PUMP ID AND LOCATION

Pump ID: _____

County: _____

Twp.: _____

B. WATER SOURCE ☐ Groundwater – Static Water Level: _____ ft. _____ in. Date Taken: _____

☐ Surface Water ☐ Pond Supplied by Well

C-1. WATER USES

Crop _____ Acres _____
Or
Other Use _____

C-2. WATER USES

Crop _____ Acres _____
Or
Other Use _____

C-3. WATER USES

Crop _____ Acres _____
Or
Other Use _____

D. WATER USE BY MONTH

Jan	Feb	Mar	Apr	May	June	**ANNUAL TOTAL:**
July	Aug	Sept	Oct	Nov	Dec	_____

D. PUMP ID AND LOCATION

Pump ID: _____

County: _____

Twp.: _____

B. WATER SOURCE ☐ Groundwater – Static Water Level: _____ ft. _____ in. Date Taken: _____

☐ Surface Water ☐ Pond Supplied by Well

C-1. WATER USES

Crop _____ Acres _____
Or
Other Use _____

C-2. WATER USES

Crop _____ Acres _____
Or
Other Use _____

C-3. WATER USES

Crop _____ Acres _____
Or
Other Use _____

WATER USE BY MONTH

Jan	Feb	Mar	Apr	May	June	**ANNUAL TOTAL:**
July	Aug	Sept	Oct	Nov	Dec	_____

A. PUMP ID AND LOCATION

Pump ID: _____

County: _____

Twp.: _____

B. WATER SOURCE ☐ Groundwater – Static Water Level: _____ ft. _____ in. Date Taken: _____

☐ Surface Water ☐ Pond Supplied by Well

C-1. WATER USES

Crop _____ Acres _____
Or
Other Use _____

C-2. WATER USES

Crop _____ Acres _____
Or
Other Use _____

C-3. WATER USES

Crop _____ Acres _____
Or
Other Use _____

D. WATER USE BY MONTH

Jan	Feb	Mar	Apr	May	June	**ANNUAL TOTAL:**
July	Aug	Sept	Oct	Nov	Dec	_____